Armed Forces College of Medicine

AFCM

Cardiopulmonary module

Clinical Integrated Cases

Pretest 1

Question 1

Which chamber forms the upper border of the heart?

a)Right and left ventricles
b)Right and left atria
c)Right atrium and right auricle
d)Right ventricle and right auricle
e)Left atrium and left auricle

Question 2

A 59-year-old man is admitted to emergency department with severe chest pain. During examination a slight rhythmic pulsation on the chest wall at the left fifth intercostal space is noted. What causes this pulsation?

A. Right atrium
B. Left atrium
C. Aortic arch
D. Apex of the heart
E. Mitral valve

Question 3

The mitral valve is formed of which of the following structure?

A.Hyaline cartilage

B.Elastic cartilage

C. Avascular C.T.

D.Mucoid C.T.

E.Loose areolar C.T.

Question 4

The second heart sound coincides with which of the following phases of cardiac cycle?

a.Isometric contraction phase.
b.Rapid ejection phase.
c.Rapid filling phase.
d.Isometric relaxation phase
e.Reduced filling phase.

Question 5

A 30-year-old female came to the physician because of increasing fatigue over the last 3 months. She also has exertional dyspnea. Cardiac auscultation over the apex of the heart revealed mid-diastolic murmur. Which of the following is consistent with this patient auscultatory finding?

a. Aortic regurgitation.
b. Mitral stenosis.
c. Pulmonary Stenosis.
d. Tricuspid regurgitation.
e. Mitral regurgitation.

Question 6

Which of the following best describe pathogenesis of rheumatic fever?

a)Immediate type hypersensitivity reaction
b)Type II hypersensitivity reaction
c) Type III hypersensitivity reaction
d)Activation of macrophages and granuloma formation
e)Activation of cytotoxic T lymphocytes

Question 7

Which of the following organisms is involved in the pathogenesis of rheumatic fever?

a.Streptococcus pyogens

b.Streptococcus pneumoniae

c.Streptococcus viridians

d.Staphylococcus aureus

e.Staphylococcus epidermidis

Question 8

A 12-year-old girl was complaining of difficulty in breathing, Swelling and pain in her left elbow and right knee. Physical examination revealed abnormal heart sound on the mitral area. Laboratory investigations elevated ASO titer and leukocytosis. Which of the following is the most likely complication of her condition?

a)Infective endocarditis
b)Ventricular septal defect
c)Systemic hypertension
d)Mitral valve perforation
e)Pericardial caseation

Question 9

A 36- year-old woman presented to her physician with dyspnea on exertion and easy fatigability. She had a history of recurrent tonsillitis and migratory joint pain and swelling affecting large joints during her childhood. Echocardiography revealed thickened mitral valve cusps with narrowing of valve orifice. Which of the following is most likely seen in her heart?

a)Suppuration in the mitral valve cusps
b)Pus in the pericardium
c)Fibrosis in the posterior wall of the left atrium
d)Amyloidosis of the myocardium
e)Necrosis of the tricuspid valve

Question 10

A 13-year-old boy is brought to the physician because of pain and swelling in his knees and ankles along with a recent onset of fever. He had an upper respiratory infection two weeks ago for which he received acetaminophen. His temperature is 38°C (100.4°F), pulse is 110/min, respirations are 22/min, and blood pressure is 115/76 mm Hg. Physical examination shows erythematous skin macules with a clear center, arthritis, and small subcutaneous nodules on the dorsal aspect of the arms. A systolic murmur in the mid-precordial area is heard on auscultation of the chest. Which of the following hypersensitivity reactions best explains this patient's symptoms?

- A. Type I
- B. Type II
- C. Type III
- D. Type IV

Question 11

A 40-year-old woman comes to the physician for a routine physical examination. She has no significant medical history, although she recalls having chickenpox and several severe episodes of pharyngitis as a child. Cardiac examination showed diastolic mumur at the apex . Which of the follow is patient?

- A. Ballooning of valve leaflets
- B. Fibrous bridging between thickened, calcified leaflets
- C. Irregular beads of calcification on the annulus
- D. Large, bulky vegetation with adjacent leaflet perforation
- E. Tiny vegetations along the line of closure of valve leaflet

Question 12

The following is the most appropriate investigation to diagnose rheumatic valvular heart disease:

A) ECG
B) Chest X-ray
C) Echocardiography
D) Myocardial biopsy
E) Coronary angiography

Question 13

An apical diastolic murmur is best heard in the following area:

A) First aortic area
B) Second aortic area
C) Pulmonary area
D) Tricuspid area
E) Mitral area

Question 14

A physician concerned about a murmur due to regurgitation of blood through the tricuspid valve would best hear the murmur at which of the following sites?

- A. At the notch immediately above the sternum
- B. Between the second and third ribs immediately left of the sternum
- C. Between the second and third ribs immediately right of the sternum
- D. Four inches to the left of the bottom of the sternum
- E. Immediately beside the left side of the bottom of the sternum

Thank
you